

Amendment to Claims

This listing of Claims will replace all prior versions and listings of claims in this Application.

Listing of Claims

Claim 1. (CURRENTLY AMENDED) An airborne method for mapping and remotely reporting thermal and critical alignment evaluation data regarding the perimeter of a ground fire comprising

from an airborne platform which is deployed above, vertically remote from, and in selectable visual proximity to at least a portion of the perimeter line of a ground fire, gathering, along a substantially common line of sight, for remote transmission, linked thermal and optical imagery data interpretable for picturing positionally-defined thermal information relating to a selected region on and along such a perimeter-line portion,

substantially simultaneously, in relation to said gathering with respect to such a selected region, and from the spatial region immediately adjacent the airborne platform, additionally acquiring fire-line isothermal data and related critical-alignment, fire-information evaluation data including air temperature, relative humidity, wind speed, and wind direction solely from airborne sensors where such data is spatially independent from ground-based data, and

transmitting such ~~thermal~~ fire-line isothermal data, optical and critical-alignment evaluation data to, and for reception and interpretation at, a remote site as a common-time-based overlay to a terrain map.

Claim 2. (ORIGINAL) The method of claim 1 which further includes, with respect to such

a selected perimeter-line region, noting, relative to the platform, the associated angular disposition in space of the associated substantially common line of sight along which such optical and thermal data for that region is gathered.

Claim 3. (ORIGINAL) The method of claim 2 which further comprises enabling said optical and thermal imagery data gathering to take place selectively along an infinitely different number of selectable, spatially-oriented, substantially common lines of sight.

Claim 4. (PREVIOUSLY PRESENTED) The method of claim 3 which further comprises effectively linking, relative to a selected perimeter-line region, the linear distance along the associated, substantially common line of sight between the selected region and the airborne platform solely from sensors on the airborne platform.

Claim 5. (ORIGINAL) The method of claim 1 which further includes associating with such optical, thermal, and critical-alignment evaluation data, GPS information which is effective to define the then-associated positions in space, relative to one another, of the selected region and the airborne platform.

Claim 6. (CURRENTLY AMENDED) Apparatus for temperature and critical-alignment evaluation mapping and remote reporting regarding a region of a ground-fire perimeter comprising

optical and thermal imaging structure mountable on an airborne support platform for disposition and movement above and over a ground fire, operable to create a flow of imagery data which is interpretable for picturing, visually, the temperature-level-differentiated perimetral outline of at least a portion of the perimeter of such a fire,

atmospheric-condition sensing structure also mountable on such a platform for cooperative behavior in relation to said imaging structure, operable when so also mounted, to generate a flow of atmospheric-condition data containing information, including fire-line isothermal data and related critical-alignment, fire-information evaluation data selected from the list including (a) air temperature, (b) relative humidity, (c) wind speed, and (d) wind direction solely from sensors on the airborne platform, and

transmission reporting structure, operatively connected to said imaging structure and to said sensing structure, operable to transmit from the mentioned support platform to a remote location such imagery and atmospheric-condition data as a common-time-based overlay to a terrain map.

Claim 7 (Cancelled).

Claim 8. (PREVIOUSLY PRESENTED) The apparatus of claim 6 which further comprises GPS sensing structure also mountable on the mentioned platform, operable to produce GPS positional information which is relevant both to the mentioned optical and thermal imagery data and to the mentioned atmospheric-condition data, as such data is associated both with the imaged portion of a fire perimeter line, and with the then relative position of the support platform.

Claim 9. (ORIGINAL) The apparatus of claim 6 which further comprises structure also mountable on the mentioned support platform for reporting, with respect to a selected optically- and thermally-imaged region of a ground-fire perimeter, the line-of-sight angular disposition in space which relates that region with the then position of the mentioned support platform.

Claim 10. (CURRENTLY AMENDED) An airborne system for mapping and remotely reporting temperature and critical alignment evaluation data regarding the perimeter of a ground fire comprising

an airborne platform deployable and movable above and over a ground fire, coordinated optical and thermal imaging structure mounted on said platform, characterized effectively with a spatially angularly adjustable, substantially common, optical and thermal view axis, and operable to create a coordinated and remotely communicatable flow of linked optical and thermal imagery data solely from sensors on the airborne platform which is interpretable for picturing the temperature-level-differentiated perimetral outline of at least a portion of such a ground fire as a common-time-based overlay to a terrain map, and

fire-line isothermal data and critical alignment data-gathering structure operatively associated with said imaging structure, also mounted on said support platform, and operable to produce, in relation to such a first-mentioned data flow, a like, remotely communicatable, companion data flow containing related critical-alignment evaluation data solely from sensors on the airborne platform including information regarding (a) air temperature, (b) relative humidity, (c) wind speed, and (d) wind direction.

Claim 11. (CURRENTLY AMENDED) An airborne ground-fire data-gathering method comprising

from an airborne platform, gathering solely from sensors on the airborne platform, for visual presentation and viewing purposes, related optical and thermal fire-perimeter data from different regions along a fire perimeter, including fire-line isothermal data,

also from an airborne platform, gathering critical-alignment evaluation data solely from sensors on the airborne platform which may be associated commonly with and relevant to such different-region optical and thermal data, and

transmitting all of such data, effectively in a geophysically-linked manner as a common-time-based visual overlay, to a remote site for map-display viewing and evaluation, wherein the transmitted data is overlaid on a terrain map.

Claim 12. (PREVIOUSLY PRESENTED) The method of claim 11 which further comprises applying to such gathered data selected critical-alignment, severity-scale parameters which are employable generally to rank, from lower to higher, fire severity conditions in such different fire-perimeter regions in terms of prioritizing the deployment of fire-fighting resources, and from, and on the basis of, said applying, effectively map-highlighting, also for viewing and evaluation, selected parts of the gathered data which indicate certain higher-severity fire conditions.